

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 11 - 13 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kot (Patent No.: US 7131379).

With respect to Claim 11, Kot disclosed in Figs 1 and 2 and column 4 lines 17 - 26:

a printing press, comprising:

a print unit (3 – 7 and the image field including 8 and 9 in column 3 lines 57 - 58);

a drive unit (10 – 11) assigned to the print unit (3 – 7);

a control unit (19) for regulating the drive unit (10 – 11); and

a print mark measuring device and/or register mark measuring device and/or a register measuring device (13, 17 – 18 wherein 13 registers all the image field in column 4 lines 13 - 14), wherein

the print mark measuring device and/or the register mark measuring device and/or the register measuring device (13, 17 – 18) are directly connected to the control unit (19).

With respect to Claim 12, Kot disclosed in Figs 1 and 2 and column 4 lines 17 - 26:

The printing press, wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device (13, 17 – 18) are connected by a means for signal transmission (the comparison signals from 18 are used in 19 in line 25) to the control unit (19).

With respect to Claim 13, Kot disclosed in Figs 1 and 2 and column 4 lines 17 - 26:

the printing press, wherein the print mark measuring device and/or the register mark measuring device and/or the register measuring device (13, 17 – 18) comprises an evaluation unit (17 – 18).

With respect to Claim 29, Kot disclosed in Figs 1 and 2 and column 4 lines 17 - 26:

a method for operation of a printing press, the printing press comprising:
a print unit (3 – 7 and the image field including 8 and 9 in column 3 lines 57 - 58);
a drive unit (10 – 11) assigned to the print unit (3 – 7);
a control unit (19) for regulating the drive unit (10 – 11); and

a print mark measuring device and/or register mark measuring device and/or a register measuring device (13, 17 – 18 wherein 13 registers all the image field in column 4 lines 13 - 14), wherein

the print mark measuring device and/or the register mark measuring device and/or the register measuring device (13, 17 – 18 wherein 13 registers all the image field in column 4 lines 13 - 14) are directly connected to the control unit (19), the method comprising:

transmitting (the comparison signals from 18 are used in 19 in line 25) a print mark (9) signal and/or the register mark (9) signal from the print mark measuring device and/or the register mark measuring device (13, 17 – 18 wherein 13 registers all the image field in column 4 lines 13 - 14) to the control unit (19), or

transmitting (the comparison signals from 18 are used in 19 in line 25) a register measuring (8) signal from the register measuring device (13, 17 – 18 wherein 13 registers all the image field in column 4 lines 13 - 14) to the control unit (19).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14 – 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kot in view of Tokiwa (Patent No. : US 6626102).

With respect to Claim 14, Kot teaches the limitations of Claim 11 for the reason above.

Kot does not teach the control unit comprises an integrated evaluation unit.

However Tokiwa discloses in Fig. 3 and column 16 lines 5 – 8: the control unit (3) comprises an integrated evaluation unit (section 39).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify the control unit of Kot by including the integrated evaluation unit taught by Tokiwa for the purpose of increasing the accuracy and speed in controlling the printing registration.

The modification/combination meets all the limitations of Claim 14.

With respect to Claims 15 - 17, the modification/combination also meets the limitations of Claims 15 – 17 (Fig. 3 and column 16 lines 5 – 24 of Tokiwa): a correction factor $((Y_n + Y_4 - Y_3))$ proportional in line 7) can be calculated (line 6) by the control unit (3) to regulate the movement (line 15) of the drive unit (41).

With respect to Claims 18 – 21, the modification/combination also meets the limitations of Claims 18 – 21 (column 1 lines 51 – 54 of Tokiwa): the print mark measuring device and/or the register mark measuring device and/or the register measuring device are connected to the control unit by a field bus system or a serial link.

With respect to Claims 22, the modification/combination also meets the limitations of Claims 22 (column 1 lines 51 – 54 of Tokiwa): a field bus system (line 53) or a serial link is provided as means for signal transmission (receive in line 52).

With respect to Claims 23 - 26, Kot teaches the limitations of Claim 23 - 26 for the reason above.

Kot does not teach the control unit has a master functionality with regard to further drive units or with regard to further control units.

However Tokiwa discloses in Fig. 3 and column 7 lines 30 - 39: the control unit has a master functionality (1) with regard to further drive units or with regard to further control units (via the network line 5).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify the control unit of Kot by including the master section taught by Tokiwa for the purpose of synchronously controlling the printing registration to improve printing quality.

The modification/combination meets all the limitations of Claims 23 - 26.

With respect to Claim 27, the modification/combination meets all the limitations of Claim 27 (Fig. 3 and column 7 lines 17 – 32 of Tokiwa): the control unit (3) comprises a signal interface (line 31) for input (receive in line 31) of a signal (message in line 32) of a print mark measuring device and/or a register mark measuring device and/or of a register measuring device (served by the interface of 31 in line 18).

With respect to Claim 28, the modification/combination meets all the limitations of Claim 27 (Fig. 3 and column 16 lines 5 – 24 of Tokiwa): the control unit (3) is provided for determining (calculated in line 6) a correction factor $((Y_n + Y_4 - Y_3))$ proportional in line 7) from the signal (line 6) of the print mark measuring device and/or register mark measuring device or the signal (line 6) of a register measuring device for regulating the movement (line 15) of at least one drive unit (41).

With respect to Claim 30, the modification/combination meets all the limitations of Claim 30 (Fig. 3 and column 16 lines 5 – 24 of Tokiwa): the method wherein a correction factor $((Y_n + Y_4 - Y_3))$ proportional in line 7) for regulating the movement (line 15) of at least one drive unit (41) is calculated (line 6) by the control unit (3) from the print mark signal or from the register mark signal or from the register measuring signal (line 6).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference of Dauer (Patent No.: US 6601506) discloses a correction factor in calculating the corrected signal for register control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuan L. Chen whose telephone number is 571-270-3799. The examiner can normally be reached on Monday-Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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